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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,211	03/28/2001	Claus Neubauer	2001P05653 US	2357
7590	08/09/2005		EXAMINER	
Siemens Corporation Intellectual Property Department 186 Wood Avenue South Iselin, NJ 08830			KIM, CHONG R	
			ART UNIT	PAPER NUMBER
			2623	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/819,211

**Applicant(s)**

NEUBAUER ET AL.

**Examiner**

Charles Kim

**Art Unit**

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-9,12,14,15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 20 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-8,12,14,15 and 17-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment and Arguments***

1. Applicant's amendment filed on March 31, 2005 has been entered and made of record.
2. In view of applicant's submitted drawings, the objection to the drawings are withdrawn.
3. Applicant's arguments, see pages 10-13, filed March 31, 2005, with respect to the rejection(s) of claim(s) 1, 3-5, 6-8, 12, 14-19 have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of 35 USC 112 first paragraph, the details of which are provided below.
4. Applicant's arguments, see pages 13-14, with respect to claims 9 and 20 have been fully considered and are persuasive. The rejections of claims 9 and 20 have been withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 3-4, 6-8, 12, 14-15, 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

Art Unit: 2623

in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claim 1, the phrase “comparing the extracted image features with a trained model...the trained model comprises at least one template image for a first template class and at least one template image for a second template class, wherein the at least one template image for the first template class is trained from one or more images of the ROI having a marker, and wherein the at least one template image for the second template class is trained from one or more images of the ROI not having the mark” in lines 7-13 is not supported by the applicant’s specification. More specifically, the Examiner was unable to find an instance in the applicant’s specification that indicates that the extracted image features are compared with a trained model comprising template images from two template classes (one having a marker and one not having a marker).

On page 10, lines 11-16, the applicant’s specification states, “a trained template could be generated using suitable features that are extracted from either one or more images of the PCB having a given marker (i.e., a “bad” template class) or one or more images of the same PCB not having the given marker (i.e., a “good” template class).” In the case where the trained model is generated from both template classes, the specification states (lines 21-24) that, “models for both template classes (good and bad) are generated as to allow the user the option to specify which template class to be used as the template, based on the implementation and desired results.” In other words, only one template class is selected for comparison with the extracted image features. This is further evident on page 12, lines 9-16 of the applicant’s specification where it states, “the user specifies which class of templates (good or bad) to utilize for the recognition

Art Unit: 2623

process...the target image is compared to each of the templates in the selected template class.”

Again, only one template is selected for the comparison process. Therefore, the applicant’s specification does not support the step of “comparing the extracted image features with a trained model...the trained model comprises at least one template image for a first template class and at least one template image for a second template class, wherein the at least one template image for the first template class is trained from one or more images of the ROI having a marker, and wherein the at least one template image for the second template class is trained from one or more images of the ROI not having the mark”, as claimed. A similar rejection is applicable to claim 12.

Claims not mentioned specifically are dependent from non-supported antecedent claims.

6. Claims 1, 3-4, 6-8, 12, 14-15, 17-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Referring to claim 1, the phrase “comparing the extracted image features with a trained model...the trained model comprises at least one template image for a first template class and at least one template image for a second template class, wherein the at least one template image for the first template class is trained from one or more images of the ROI having a marker, and wherein the at least one template image for the second template class is trained from one or more images of the ROI not having the mark” in lines 7-13 is not supported by the applicant’s specification. More specifically, the applicant’s specification is non-enabling in regards to how

Art Unit: 2623

the “extracted image features” are compared with a trained model comprising two template classes.

On page 12, lines 9-16, the applicant’s specification states that “the user specifies which class of templates (good or bad) to utilize for the recognition process...the target image is compared to each of the templates in the selected template class and the recognition results are determined based on the template having a maximum correlation coefficient above a predetermined threshold.” Accordingly, the extracted image features are compared with only one of the selected template classes, not both. Therefore, the Examiner was unable to find enabling support for “comparing the extracted image features with a trained model...the trained model comprises at least one template image for a first template class and at least one template image for a second template class, wherein the at least one template image for the first template class is trained from one or more images of the ROI having a marker, and wherein the at least one template image for the second template class is trained from one or more images of the ROI not having the mark”, as claimed. A similar rejection is applicable to claim 12.

Claims not mentioned specifically are dependent from non-enabled antecedent claims.

***Allowable Subject Matter***

7. Claims 9, 20 are allowed.

*Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

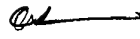
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

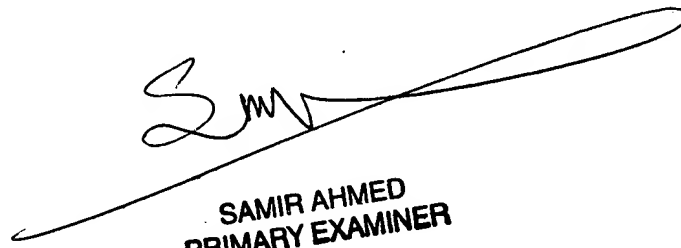
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
ck  
August 4, 2005

  
**SAMIR AHMED  
PRIMARY EXAMINER**